DOCUMENT RESUME

ED 367 044 EA 025 032

AUTHOR Dickson, Graham S.; Lim, Sam
TITLE The Development and Use of Indicators of Performance in Educational Leadership.
PUB DATE 91
NOTE 26p.; Paper presented at the Annual Meeting of the International Congress for School Effectiveness and Improvement (4th, Cardiff, Wales, United Kingdom, January 1991).
PUB TYPE Speeches/Conference Papers (150) -- Viewpoints (Opinion/Position Papers, Essays, etc.) (120)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Administrators; *Educational Objectives; Elementary Secondary Education; *Evaluation Methods; Foreign Countries; *Leadership; *Organizational Effectiveness; Public Schools
IDENTIFIERS *British Columbia; *Indicators

ABSTRACT

Indicators as measures of performance have become considered fundamental to improving educational systems. While many attempts have been made to design frameworks to help manage organizations in education, most of these projects are in the developmental stage. Although these models have not been tested as leadership tools, the indicator concept has great theoretical promise. However, there are some ways to change indicators to enhance their use as a tool for effective leadership. Indicators have had little impact on administrative performance for three reasons. First, the development and use of indicators has been undertaken by researchers and not administrators, and indicators hold little significance to administrators. Second, most indicators measure input and process, not outcomes. Third, it has not been demonstrated that indicators can be used for organizational improvement. Four related projects in British Columbia illustrate that administrators should use indicators for planning and public relations. Indicators should also reflect the vision of the organization, and all shareholders should be included in their development and use. With these changes, indicators can be powerful forces for educational improvement. Appendix 1 contains the British Columbia government's mandate statement for education. (Contains 37 references.) (JPT)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 367 044

The Development and Use of Indicators of Performance in Educational Leadership

by Graham S. Dickson, PhD, and
Sam Lim, PhD.

A Paper submitted to The International Congress for School Effectiveness and Improvement, 1991: Cardiff, Wales

Contact Address:

British Columbia Ministry of Education
620 Superior Street
Victoria, B.C. CANADA
V8V 2M4
Phone: (604) 356-0276; FAX: (604) 356-9457

EA 025 032

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

S. Lim

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

The Development and Use of Indicators of Performance in Educational Leadership

Abstract:

Recently indicators of performance have been suggested as effective tools for educational leadership responsibilities of evaluation and accountability. Based on the use of indicators in British Columbia, Canada, this paper suggests that if administrators use indicators for planning and public relations, if indicators reflect the vision of the organization, and if shareholders are involved in their development and use, then they can be powerful forces for educational improvement.

The Development and Use of Indicators of Performance in Educational Leadership

In recent years Indicators of performance (Elliott, 1990; Oakes, 1989, Shavelson, 1988) have become touted as fundamental to the improvement of education systems. Many governmental agencies[1] have attempted to design indicator frameworks (Odden, 1990) that assist in the management of organizations at the school, district, national and international level. However, most of these projects are in the developmental stage, and few administrators have testified to their efficacy as leadership tools. It appears that the indicator concept has great theoretical promise (Center for the Study of Evaluation, 1989; Porter, 1988; Richards, 1988) but has yet to demonstrate a meaningful influence on improved administrative performance (Dickson, 1990).

The purpose of this paper is to suggest some changes to the development and use of indicators so as to enhance their use as a tool for effective leadership. It is contended that there are three reasons why indicators have had little apparent impact on administrative performance. The first is that the development and use of indicators has not been an administrative activity, but a research and development one; therefore leaders and stakeholders of an organization see little relationship between statistics and day-to-day work. The second is that most functional indicators are input and process indicators, not outcome measures. As such, they may have little apparent bearing on the goals of the organization. Third, a rationale and a practical strategy to demonstrate how indicators can be used for organizational improvement has not been provided to administrators.

---

[1] Examples of such projects are the Organization for Economic Cooperation and Development (OECD) Education Indicators project, involving 22 nations; the Council of Education Ministers of Canada (CMEC) project in Canada; and the National Center for Education Statistics (NCES) project in the U.S.

Much of the information and analysis derives from four related projects in which British Columbia educators have been participants during the past five years. The main contributor was the "District Formative Evaluation Project," (Dickson, 1990), in which key indicators were used in a process designed to evaluate school districts in British Columbia.

Specific topics covered in the paper are:

1. British Columbia's Involvement in Indicator Projects.

2. Broadening the definition of "indicators of performance".

3. How key indicators should be developed.

4. The role indicators can play in educational leadership.

5. The implications such a role has for our understanding of educational leadership.

British Columbia's Involvement in Indicator Projects

Education organizations at all levels in British Columbia have been involved in evaluation and accountability projects which have attempted to use at least a variation of the key indicator concept. Three of these--the Council of Ministers of Education Canada (CMEC) project, the schools accreditation project, and the provincial indicator project--have yet to utilize key indicators for administrative purposes. It is at the district level, however, that indicators of performance have been effectively developed and used. This latter project, called the District Formative Evaluation Project, has provided experience with indicators that will strongly influence the direction of similar endeavors at other system levels.

The CMEC, School Accreditation, and Provincial Indicators Projects

At the national level British Columbia is participating in the CMEC project, in which the ten provinces are attempting to identify and report on provincial inputs, processes, outputs, and outcomes. To this point most statistics reflect an overwhelming emphasis on input and process indicators (e.g. enrolment statistics, finance statistics) as opposed to output (e.g. student performance on provincial tests) or outcome (e.g. student behavior in the workplace) indicators. To a large extent this has been because energies associated with indicators have been devoted primarily to methodological research and development, rather than their role and use in administration; thus, to a great extent, researchers and statisticians have controlled the choice and development of indicators. This is beginning to change as the users of information--the Ministers and Deputy Ministers of Education--begin to assert control over the indicator project.

A second project--school accreditation--is moving towards the development of key indicators for schools. In 1987 the existing secondary accreditation process (basically a summative evaluation activity focusing on qualitative judgments of school process) was shifted to a formative process aimed at long range planning (Gray, 1989). In addition, a new Primary-Intermediate school accreditation process was developed (Lim, 1989; B.C. Ministry of Education, 1989). The accreditation booklets contain questions about process elements, but school staffs are required to collect data about student performance and use this data as the basis upon which to ground their judgments. The end result of the activity is to be a cooperatively developed school growth plan, endorsed by staff, parents, and district staff alike--and with each group assigned responsibilities based upon demonstrated student need.

At the provincial level, Ministry of Education in British Columbia began experimenting with indicators of performance in 1980. Until 1985 these efforts appeared to be input and process based, and consisted of

developing large inventories of operational statistics and tracking their change over time; they primarily had a management function.

In 1985 a major change of focus was attempted. Both the B.C. School Superintendents Association (BCSSA) and the Ministry of Education endorsed a cooperative project the purpose of which was to develop key indicators "that can be used by various levels of the system to help determine to what extent the goals of education (intellectual, social, human, vocational) are being achieved" (Mussio, 1985). The emphasis was shifted to outcome measures, and the intent was to use indicators for evaluation, planning, and communicating about the performance of the education system to the public. Indicators were to be developed for the province as a whole and for school districts. However, this shift in focus placed a greater emphasis on indicators in districts, and the provincial indicator project has continued to lag behind districts in its development and use of indicators.

The District Formative Evaluation Project

Between 1985 and 1987 a "first stage" district evaluation pilot project using indicators was initiated. The project had three main aspects to it. The first component was a values framework, whereby the fundamental principles of the B.C. public education system were given expression as "student development" goals (intellectual, social, human, and vocational development), and "system development" attributes (accessibility, relevance, professionalism, cost-effectiveness, management and accountability, and public satisfaction)[2] .

The second aspect to the evaluation project was a set of key indicators developed at the Ministry of Education and designed to be outcome measures of the goals and attributes. These were communicated to school districts in tabular format, and simply consisted of

---

[2] In 1989 the Government of British Columbia, in publishing a new mandate for education in Brtitish Columbia, altered the goal and attribute framework. The new values are outlined in Appendix 1.

reconstituting data sent to the Ministry by school districts and returning it to them under goal and attribute headings. The indicators were, in most instances, existing data that was simply repackaged in slightly different formats. The overall array of indicators was also sparse, in that some goals and attributes had no outcome measures assigned to them.

The third component of the evaluation/information system was a set of questionnaires, seven in total, constructed to elicit opinion from different education constituents about the goals and attributes. Constituent groups included employers, elementary and secondary students, the general public, teachers, graduates, and parents. Districts were to administer these surveys, use the information in conjuction with the quantitative indicators, and make judgments about the quality of education in the school district. No instructions about sampling, distribution, or interpretation of information was provided to the districts, and in most instances districts were ill-prepared to administer much less interpret the resulting information.

A number of lessons were learned from the pilot. First, politics interfered with the administration of surveys: in a number of instances teacher groups refused to support questionnaire use[3] . District staff had a difficult time understanding the meaning of both the quantitative indicators (presented in tabular form) and survey results. Resulting reports were lengthy, loaded with difficult-to-read tables, and seemingly unrelated to district direction or purpose. Finally, it appeared that district staff had little understanding as to how this information related to their organization: how to use it to evaluate system success, or to communicate it to the public.

Yet, despite its many flaws, the project was restructured and a second initiative using key indicators of performance was begun (Dickson,

[3] B.C. was at this time in the midst of its "education wars"--a time when various education interest groups were fighting amongst themselves. The B.C. Government's fiscal restraint policy and subsequent teacher strikes contributed to a climate in which public trust in education quality was eroded.

1990). For this stage a new conceptual base was constructed. School districts were seen as "learning organizations" (Morgan, 1986); and organizations themselves as value laden, human constructs of language and symbols (Greenfield, 1979, 1980). In organizations of this type administrators were characterized as leaders whose main function was to articulate the philosophy of the organization and convert it into practical action (Hodgkinson, 1978, 1983). Formative evaluation (Scriven, 1983; Stufflebeam and Webster, 1988) was seen to be an activity that represented this concept of leadership. Formative evaluation has been identified as a process that can assist with planning, decision-making, and accountability (Glasman, 1986; Stufflebeam and Welch, 1986).

District administrators were partners in the development of the district formative evaluation process, so evaluation strategies that were consistent with literature on effective administration were sought out. Bennis (1989), for example, stresses the importance of organizational vision; Holmes (1986), a set of fundamental values upon which all organizational activity is based. Effective visions are not, however, defined solely by the administrator (Storey, 1988). A vision that is not shared by others in the organization, that does not reflect their personal values and needs, will not inspire commitment. Therefore, administrators are advised to employ participatory leadership activities to allow individuals to contribute in the articulation of vision.

Barnard (1938) states that good administration is "moral". By this he means that individuals within an organization should be given "authority commensurate with responsibility". For senior administrators whose authority extends across many organizational domains far removed from the classroom, but whose responsibility is the enhancement of student learning, moral behavior means being able to resolve dilemmas at high levels of complexity so that they ultimately benefit student achievement.

A tool to assist administrators with moral decision-making is evaluation. Cooley and Lohnes (1976) suggest that evaluations based

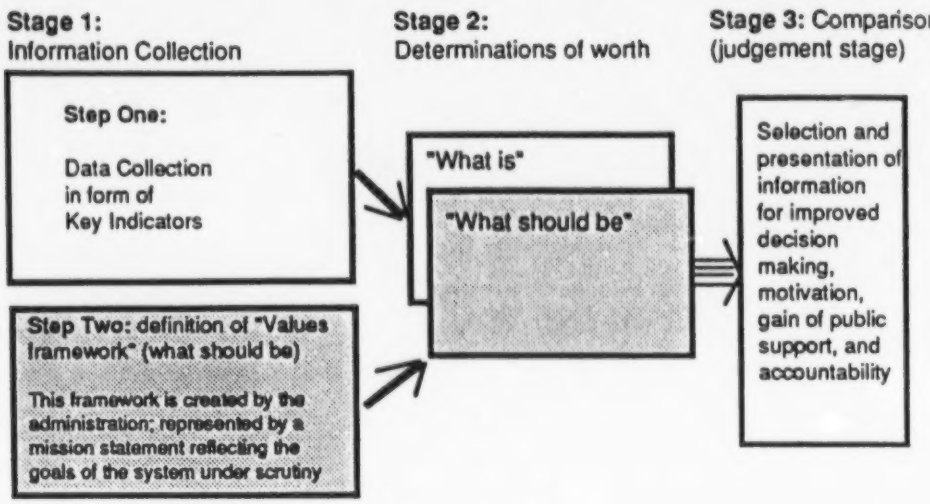
on knowledge of student performance "are examples of moral behaviors" because they "seek to provide information germane to decisions about what is best for children, or for students of any age". In order to succeed, senior administrators must be in possession of student outcome information, and use strategies that ensure that this knowledge becomes a factor entering into short- and long-term decision-making.

Another way administators can enhance the potentiality for moral decision-making is by employing a variety of activities to "manage meaning". McClintock, (1987) describes this skill as:

> ...to use, and govern the use of, language and other symbols, stimulate action from which information about reality will be produced, facilitate interactions among stakeholders in order to share perceptions, and conduct retrospective interpretations of events (p. 319).

The meaning administrators wish to keep at the forefront of all members of the education organization is, of course, its mission; and if the mission relates directly to the improvement of student learning, then it is a moral mission. Thus educational leaders should "manage the meaning" of all activities by directly or indirectly relating them to required student needs.

The evaluation process used in the second district pilot (1987-89) was designed to mesh these administrative principles into a coherent plan of action. Key indicators were made part of a holistic evaluation process, which "provides policymakers with sets of data on how well a program is doing from bureaucratic, political, and societal persepectives" (Moran, 1987, p. 613). As the following diagram shows, the mandate statement of the organization becomes the "ideal" statement of values for the school district.



In the second district formative evaluation project, these values were initially stated as the goals and attributes of education. Indicators represent the manifestation of those values in real terms; i.e., in terms of data collected regarding student and system performance. Indicators of student performance provide the administrator with the information needed to make "moral" decisions. The ideal was then to be compared to what the indicators themselves demonstrated, and decisions made with regards to organizational health and directions for improvement.

To build a participatory component into the process, and to develop ownership of the evaluation's results, the evaluation was designed to be undertaken by a stakeholder group (Ayers, 1987). Stakeholder group involvement overcame the political impediments to the first pilot. This group chose what key indicators would be used to evaluate the district, and became involved in constituent surveying. They were encouraged to seek out data they did not already have, and were not bound by the ministry-produced data. The task of "managing meaning" was attempted through the production of both public and private evaluation reports and the development of extensive follow-up procedures to utilize them. Focusing attention on values relating to student need at a district level and by planning for the future around these needs in an open manner helped ensure that the evaluation

report would not be a wasted activity. The evaluation process has been voluntarily employed in approximately ten districts in British Columbia.

Broadening the Definition of Indicators of Performance

Key indicators are, traditionally, subjective measures of system performance converted into quantifiable units (Hanushek, 1986; Murnane, 1987). For example, if one makes the subjective determination that graduation rates are a measure of a school's achievement, then this measure, although subjectively determined, can be quantified and used as a performance measure. Indicators usually describe key aspects of the school system in relation to its objectives. They provide comparisons with other jurisdictions, comparisons over time, and comparisons against standards in order to give educational organizations a sense of perspective as to how it compares to others in terms of inputs, processes, outputs and outcomes.

Many writers (Johnstone, 1981; Hanushek, 1986) see indicators as "quantitative data" derived from test scores, or aggregates of data from comprehensive data banks. Experiences in the district formative evaluation project suggest, however, that indicators can be of three types: quantitative, or "hard" data; qualitative, or "soft" data--such as perceptions collected through surveying; and demonstrative data: specific examples that represent a standard, or score. Taken together the three types of indicators give three valuable perspectives of a measured value, and can lead to productive discussion of improvement needs. These three types of indicators can be derived from four main sources: smaller scale evaluation (student outcome) studies, research studies, interest group opinion, and public opinion through polling (see Figure 2).

Also, to be effective, key indicators need to be significant, meaningful outcome representations of an organization's mission; in the case of school districts the majority must be measures of student

performance. Indicators should be able to reflect changes in educational action through fluctuation of trends in score; or by demonstrating agreed upon standards of quality represented by a score, or accepted practice. Indicators should represent, either singly or in concert, the performance of a whole range of students, and be such that changes in score can be clearly attributed to changes in educational action.

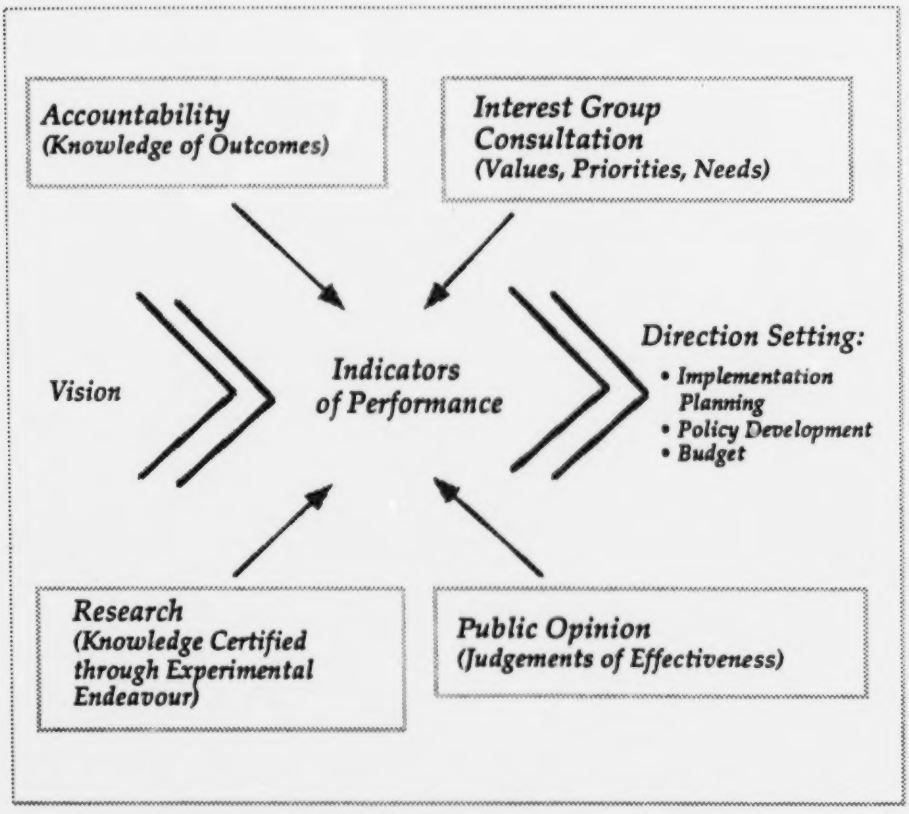


Figure 2: Data sources for indicator development

How Should Key Indicators Be Developed?

If indicators of performance are built into an overall formative evaluation strategy for a school district, they can be powerful tools for articulation of purpose, motivation, planning, and public relations.
In order to play this role, however, they must be developed according to the leadership principles described earlier. Figure 3 outlines how

these processes were converted into an eight step procedure for evaluating B.C. school districts.

Although key indicator development is the fourth step in the process, steps two and three are vital to indicator inception, and step five to data gathering[4] . For example, formation of the stakeholder team is important because (1) it is assigned the task of determining key indicators of performance, and (2) it provides an opportunity to tap into many different viewpoints as to what evidence people use to evaluate education systems. The stakeholder concept is also a device to mitigate the possibility of political fragmentation. Therefore, it is

The Eight Steps of District Evaluation:

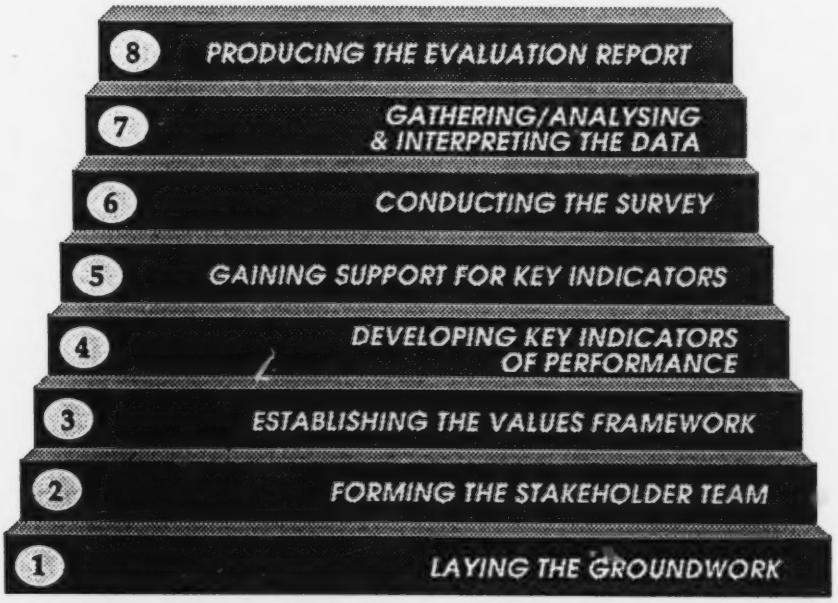


Figure 3: The district formative evaluation process for school districts.

[4] Steps seven and eight are also conducted by the stakeholder group but are not described here. For further information on the evaluation process, see The Leadership Implications of a Ministry of Education Evaluation in Three School Districts: A Naturalistic Inquiry, by G. Dickson (1990).

BEST COPY AVAILABLE

important that the stakeholders represent all significant interest groups that have a stake in the educational process. Stakeholder groups might be comprised of teachers, administrators, students, parents, business people, and even pensioners, depending on the political realities of a single district. It is also important that the indicators be representations of the organization's values (i.e., mission statement or mandate); so the group's first task is articulation of what makes that district unique and meaningful to its clientele.

Activities the stakeholder group should follow in developing key indicators are:

1. Team members should be informed about the nature of key indicators described earlier in the paper.
2. Either before or during this activitiy, each team member should meet with his/her constituents to gather input on the choice of key indicators.
3. The team brainstorms potential indicators suitable for each element of the values framework.
4. The team decides on both qualitative and quantitative indicators for each value.
5. The team determines how data will be collected and presented.
6. Potential data sources are identified, and refinements to key indicator development is made based on available data. Qualitative data (to be collected by survey) are identified for questionnaire development.

It is important before starting this process that team members thoroughly understand the concept of key indicators. One significant guideline for the brainstorming process is that participants should articulate evidence that they currently use to judge whether or not a particular value of the system has been achieved. A major strength of the process is that it depends on the intuitive judgments of a variety of people representing a multitude of perspectives.

In making final decisions about indicators for the district, a decision-making model should be employed which sets priorities. In the case of the district evaluations in B.C., this was the Q-sort (Dickson, 1990). This process allocated equal input to the final decision to each stakeholder. Prior to final decision-making the original brainstormed indicator list was pared down by gaining consensus as to the extent to which each individual item corresponded to the criteria of a good indicator (discussed above). Indicators that did not meet the majority of requirements were rejected. Indicators that were not able to be expressed in measurable terms were investigated as to the possibility of representation through demonstration, e.g., photographs, lists of achievements, or sample questions and answers.

What is the Role of Key Indicators in Leadership?

Using the above processes, administrators can develop indicators that directly reflect, in demonstrable terms, the fundamental values of the organization. If agreed upon by all interest groups they can become a unifying force in a school or district. A number of districts discovered that sensitive reporting of educational needs supported by indicator evidence can gather support for change. If emphasis is placed on developing output and outcome indicators then the likelihood of decisions being made on the basis of student needs is enhanced. Procedures can be developed that utilize key indicators for public discussion, and for strategic planning.

How the district formative evaluation strategy can be constructed so as to achieve these administrative goals is outlined in Figure 4:

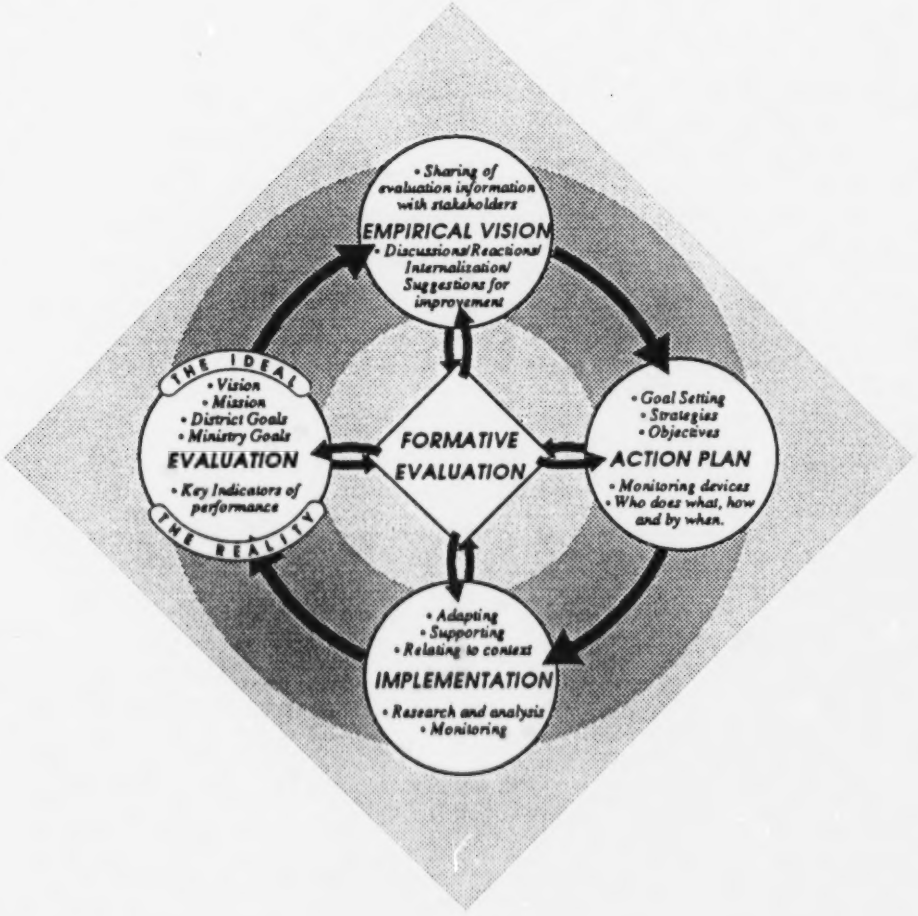


Figure 4: An evaluation-based strategic planning model

The strategic planning model outlined above is intended to assist administrators by:

Step 1, Evaluation: An evaluation of the districts purpose is achieved by: (1) clarifying organizational vision, by expressing it in terms of ideal values; (2) developing indicators of performance (realities) through the use of the procedures outlined in the district formative evaluation process; and (3) comparing the two states and making judgments of how well the ideal values are being achieved.

Step 2, Creating an Empirical Vision: Practical meaning is given to the district's vision when an evaluation report (containing indicators deemed by the stakeholder team to be of public interest and organized around the district's mission) is produced for the public. The use of focus groups and public

BEST COPY AVAILABLE

meetings can elicit new judgments and suggestions for improvement from interest groups.

Step 3, Action Planning: This means developing action plans, directly related to the district's mission, that outline who is to do what by when in an operational sense. Such plans will identify responsibilities to be assumed by various stakeholder groups as well as educators. Indicators that will be influenced by implementation of the plan are then identified as monitoring devices.

Step 4 Implementation: Implementation consists of carrying out the action plans, adapting them according to practicalities of context, researching their effectiveness, and monitoring the performance of indicators.

The constant in the whole process is the task of formative evaluation. Through the development, measurement, discussion and use of certain key indicators of performance as monitoring devices adaptive adjustments can be made as the stages progress. Indicators provide a sense of stability to the long range plan, and definition to the concept of formative evaluation. For example, if graduation rate is an indicator of performance, then a planning group can establish expected performance targets by which to judge the effectiveness of growth and change. Each individual person and each interest group in the organization can alter or adapt their roles and responsibilities to accomplish this goal in light of tangible results (desirable or undesirable).

Also, if all organizational members are then forced to constantly revisit the vision of the district by monitoring overall district performance regularly and systematically as implementation persists, and if this is done in a public context, then the mission of the district will start to impinge directly on all operational as well as on strategic decision-making. A simple requirement like ensuring that all decisions of a budgetary or personnel basis be linked to the mission and expected performance on key indicators ensures an educational basis--a student-need foundation--to all decision-making. Management of meaning is achieved as clarity is given to philosophical principles in an operational sense. A small number (about 5-8) of indicators, if

endorsed publicly, will allow for day-to-day monitoring and analysis. Expectations of achievement and targets of performance need to be established publicly to give form and substance to the long range strategic plan. Regular, systematic discussions held with sub-organizational groups and clients will maintain focus, and formal reports to the public become year-to-year records of organizational performance available for perusal and analysis.

Some of the tactics employed by districts to engender public support and input to decision-making after the district evaluation are listed below:

1. Budget and planning decisions were based on analysis of which goal or attribute was a priority need, based on indicator performance.

2. A video version of the evaluation report was created. During education week, the video was run continuously in a number of shopping malls, and a manned booth was located nearby; individuals were encouraged to take an evaluation report for personal reading.

3. Evaluation Booklets were placed in the waiting rooms of dentists and doctors throughout the school district.

4. Members of the management team took the video and booklets to service club meetings, using the video as a lead in to analysis of the book, followed by discussion of the District's educational performance.

5. The school district superintendent presented the video and booklet at a meeting of senior members of the business community.

6. Copies of the booklet were sent to each school in the district for distribution and use at staff meetings.

7. Parent groups in each school used the video and booklet as the topic of a parent meeting.

8. Media contacts were made, including a television program using clips from the video and interviews with the Director of Communications.

9. The video has been placed in the foyer of the school district office and is played for visitors while they are waiting.

10. Evaluation reports have been disseminated to real estate companies so they can be distributed to individuals moving into the district.

Implications for Leadership

In essence, a strategic planning and accountability model employing indicators of performance actually represents a significant shift from a bureaucratic model of leadership, in which the currency of control is authority, to a "cultural image" model (Teddlie, Kirby and Stringfield, 1989). The cultural image model "uses processes and symbols, has a broad and internally forged definition of purpose, and utilizes a 'child-as-client' orientation" (p. 234). The processes and procedures outlined in this paper suggest that control is less a function of authority and more a function of value congruency. Vision, management of meaning, morality, and creating ownership are value-affirming and consolidation processes; so are the processes and procedures associated with the construction of key indicators, evaluation reports, and stakeholder based action plans.

In the cultural model of leadership, leaders seek control through the creation of common knowledge. The embodiment of organizational purpose becomes a set of ideals or values. Control is less a function of authority and more a function of values consolidation. Value congruency is sought through diminishment of hierarchical status, creation of trust and teamwork, and placing influence in tasks and structures that embody democratic, participatory principles. The currency of influence is information, and an operational understanding of the district's mission or mandate, not role or status. The suggested purposes of evaluation--improved accountability, maintenance and gain of public and professional support for education, and improved decision making--are little more than results attributable to an "educated" organization. Organizational improvement through improved knowledge of student and system performance replaces

formal control by the leader as the source of organizational change. If a formal leader can see the vision, accept loss of personal control through authority, reformulate roles and responsibilities around identified student need, and be possessed of the will and ethical skill to deal with challenges the change will present, then he or she can restructure the organization into a true learning entity in which indicators of performance have played an important role in improving services to students.

Conclusion

The use of indicators of performance in the British Columbia education system has provided some direction for school, school district, and provincial administrators as to how they may be used to improve leadership potential. Indicators must be defined by senior decision makers rather than by researchers. Indicators should be cooperatively developed, be outcome demonstrations of student performance, and be linked to a education organization's philosophical purpose.

A formative evaluation process using indicators, and based on the administrative principles of member participation, vision-sharing, management of meaning, can be effectively used at the macro-organization level for strategic planning and public relations. In so doing the administrator is, however, embracing a "culture"-based leadership rather than an authority-based approach, and should be confident that he/she has both the skills and the will to ensure that organizational improvement will result.

References

Ayers, T.B. (1987). Stakeholders as partners in evaluation: A stakeholder-collaborative approach. Evaluation and Program Planning. 10, 263-271.

Barnard, C. (1938). The functions of the executive. Cambridge: Harvard University Press.

B.C. Ministry of Education, Program Evaluation and Research Branch: (1990). The Primary--Intermediate Accreditation Process. Queen's Printer: Victoria, B.C.

Bennis, W. (1989) Why leaders can't lead. San Francisco: Jossey-Bass.

Canadian Education Statistics Council, (1990). A statistical portrait of elementary and secondary education in Canada. Toronto: Council of Ministers of Education Canada.

Center for Research on Evaluation, Standards and Student Testing (CRESST), (1989). CRESST Evaluation Comment, (December, 1990) Published papers of an international conference entitled, Educational quality indicators: Taking Stock, November, 1989.

Cooley, W. W., & Lohnes, P. R. (1976). Evaluation Research in Education. Irvington Publishers.

Dickson, G. S. (1990). The leadership implications of a Ministry of Education evaluation in three school districts: A naturalistic inquiry. Unpublished dissertation, University of Victoria, B.C.

Dickson, G.S. (1989) A 'values' framework for the British Columbia education system. Research Forum, 4, (Winter), 34-38.

Elliott, E. J. (1989) Accountability in the Post-Charlottesville era. CRESST Evaluation Comment, (December), 1-5.

Glasman, N.S. (1986). Evaluation-based leadership. Albany: State University of New York Press.

Greenfield, T. B. (1979). Organization theory as ideology. In P. Gronn (Ed.), T. B. Greenfield & his critics (pp. 46-62). Victoria, AUS: Deakin University Press. (Reprinted from Curriculum Inquiry, 1979, 9(2), 97-112).

Gray, L. (1989). Secondary school accreditation: Meeting the challenge. Research Forum, 4, (Winter), 41-45.

Greenfield, T. B. (1980). The man who comes back through the door in the wall: discovering truth, discovering self, discovering organizations. In P. Gronn (Ed.), T. B. Greenfield & his critics (pp. 88-118). Victoria, AUS: Deakin University Press. (Reprinted from Educational Administration Quarterly, 1980, 16(3), 25-59. Elliott, 1990.

Hanushek, E. (1986). The economics of schooling: Production and efficiency in public schools. Journal of Economic Literature, 24, 1141-1177.

Hodgkinson, C. (1978). Towards a philosophy of administration. Oxford: Basil Blackwell.

Hodgkinson, C. (1983). The philosophy of leadership. Oxford: Basil Blackwell.

Holmes, M. (1986). Comment. Interchange. 17(2), 80-90.

Johnstone, J. N. (1981). Indicators of education systems. London: Kogan Page.

Lim, S. (1989). The revision of elementary school assessment in British Columbia. Research Forum, 4, (Winter), 38-41.

MacClintock, C. (1987). Administrators as information brokers: A managerial perspective on naturalistic evaluation. Evaluation and Program Planning. 10(4), 315-324.

Morgan, G. 1986. Images of Organization. Beverly Hills, CA: Sage.

Moran, K. T. 1987. Research and managerial strategies for integrating evaluation research into agency decision making. Evaluation Review. II(5), 612-630.

Murnane, R. J. (1987). Improving education indicators and economic indicators: The same problems? Educational Evaluation and Policy Analysis, 9(2), 101-116.

Murnane, R. J., & Pauly, E. W. (1988). Lessons from comparing educational and economic indicators. Phi Delta Kappan. 69(7), 509-513.

Mussio, J. (1985). Evaluation/information project proposed policies. Draft report presented to a meeting of the Executive Committee, Victoria, B.C.

Oakes, J. (1989). What educational indicators? The case for assessing the school context. Educational Evaluation and Policy Analysis, 11(2), 181-199.

Odden, A. (1990). Educational indicators in the United States: The need for analysis. Educational Researcher, 19(5), 24-29.

Porter, A. (1988). Indicators: Objective data or political tool? Phi Delta Kappan. 69(7), 503-508.

Richards, C. E. (1988). Indicators and three types of educational monitoring systems: Implications for design. Phi Delta Kappan. 69(7), 495-498.

Rossi, R. J., & Gilmartin, K. J. (1980). The handbook of social indicators: Sources, characteristics and analysis. New York: Garland.

Scriven, M. (1983). Evaluation Ideologies. In G. F. Madeus, M. S. Scriven, & D.L. Stufflebeam (Eds.), Evaluation models: Viewpoints on educational and human services evaluation (pp. 229-260). Boston: Kluwer-Nijhoff.

Shavelson, R. J. (1988). The 1988 Presidential Address, contributions of educational research to policy and practice: Constructing, challenging, changing cognition. Educational Researcher, 17(7), 4-11.

Storey, V. (1988). Principals of Tomorrow. Vancouver: Eduserve & the British Columbia Principals' and Vice-Principals' Association.

Stufflebeam, D. L., & Welch, W. L. (1986). Review of research on program evaluation in United States school districts. Educational Administration Quarterly, 22(3), 150-170.

Stufflebeam, D. L., & Webster, W. J. (1988). Evaluation as an administrative function. In N. J. Boyan (Ed.), Handbook of research on educational administration. Longman: New York.

Teddlie, C., Kirby, P. C., & Stringfield, S. (1989). Effective versus ineffective schools: Observable differences in the classroom. American Journal of Education, May, 221-236.

Appendix 1:

The British Columbia Government's Mandate Statement for Education

Mission Statement:

The purpose of the British Columbia school system is to *enable learners* to develop their individual potential and to acquire the knowledge, skills, and attitudes needed to contribute to a healthy society and a prosperous and sustainable economy.

Goals of Education

Prime Goal of Public Schools -- Supported by the Family & Community

•*Intellectual Development* -- to develop the ability of students to analyze critically, reason and think independently, and acquire basic learning skills and bodies of knowledge; to develop in students a lifelong appreciation of learning, a curiosity about the world around them and a capacity for creative thought and expression.

Goals that are shared among Schools, the Family & Community

Schools are expected to play a major role, through learning experiences and supervised practice, in helping students to achieve the following goals:

•*Human & Social Development* -- to develop in students a sense of self-worth and personal initiative; to develop an appreciation of the fine arts and an understanding of cultural heritage; to develop an understanding of the importance of physical health and well being; to develop a sense of social responsibility, and a tolerance and respect for the ideas and beliefs of others.

•*Career Development* -- to prepare students to attain their career and occupational objectives; to assist in the development of effective work habits and the flexibility to deal with change in the workplace.

Attributes of the Public School System:

•*Accessibility* -- a variety of programs is available in the province to meet the full range of student needs.

•*Relevance* -- programs are current, and relevant to the needs of the learner.

- *Equity* -- resources are allocated fairly.

- *Quality* -- professional teaching and administration are of high quality.

- *Accountability* -- resources are allocated in a cost-effective manner; parents and the community are informed of the progress of schools and are involved as partners in planning.